

Verifying Trigonometric Equations HW

1) $\sec^4 x - \tan^4 x = 2\tan^2 x + 1$

2) $\tan x \sin x = \sec x - \cos x$

3) $(1 - \cos^2 a)(1 + \cos^2 a) = 2\sin^2 a - \sin^4 a$

4) $\frac{1 - \cos x}{1 + \cos x} = (\cot x - \csc x)^2$

5) $\frac{1}{\sin \theta \cos \theta} - \frac{\cos \theta}{\sin \theta} = \frac{\sin \theta \cos \theta}{1 - \sin^2 \theta}$

$$6) \frac{\sin \theta \cot \theta + \cos \theta}{2 \cot \theta} = \sin \theta$$

$$7) (1 + \tan \theta) \left(\frac{\sin \theta}{\sin \theta + \cos \theta} \right) = \tan \theta$$

$$8) \cos^3 x \sin^2 x = (\sin^2 x - \sin^4 x) \cos x$$

$$9) \frac{\sin x}{1 + \cos x} + \cot x = \csc x$$

$$10) 2 \cos^3 x - \cos x = \frac{\cos^2 x - \sin^2 x}{\sec x}$$